UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/491,661	01/27/2000	Jason L. Gridley	29423/209	8880

23460 7590 02/26/2003

LEYDIG VOIT & MAYER, LTD
TWO PRUDENTIAL PLAZA, SUITE 4900
180 NORTH STETSON AVENUE
CHICAGO, IL 60601-6780

EXAMINER
FISCHER, JUSTIN R

ART UNIT	PAPER NUMBER
1733	18

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/491,661	Applicant(s) GRIDLEY ET AL.	
	Examiner Justin R Fischer	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-20 and 22-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-20 and 22-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14-20 and 22-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claims 14 (line 9) and 22 (line 10) contain the following limitations, respectively: "tire drive" and "tread drive". First, it appears that applicant intended to describe the same component of the apparatus, although different terminology is use. It is suggested that applicant amend the claims to provide consistent language through the claims. Second, it is unclear exactly what constitutes the "tire drive" or "tread drive". The examiner was unable to find any description of such a component in the original disclosure. For examination purposes, the "drive" is being viewed as defining the conveyor that allows the tread to be adjusted.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 14, 19, 20, 22-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor (US 4,096,008, of record) in view of the Admitted Prior Art (Page 4, Lines 7-15) and Schelkmann (US 3,855,030, newly cited). Taylor is directed to

a method of applying a tread material comprising measuring a circumference of a tire casing, electronically communicating the circumference of the tire to a tread dispenser (mold or roll/cutter assembly), dispensing a length of tread based on the tire circumference, and cutting the tire tread (Column 3, Lines 37-44). The reference, however, is silent as to any adjusting step prior to the cutting of the length of tread. In any event, it would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the dispensed length, if necessary, when using a repeating tread pattern in order to obtain an aesthetic property (match tread pattern) and eliminate any imbalance that would contribute to vibrations as is well known in the tire industry, as shown for example by the Admitted Prior Art (Page 4, Lines 7-15) and Schelkmann (Column 2, Lines 4-12). In this instance, both the Admitted Prior Art and Schelkmann recognize the desire to match tread ends when a repeating tread pattern is used. It is clearly evident that upon producing a dispensed length, the tread patterns of the leading and prevailing edges of said dispensed length would be either visually or automatically determinable, it being recognized that the matching of ends to produce an aesthetic property is desired as set froth above. Furthermore, it is well known and conventional in the tire industry to either manually or automatically place a length of tread onto a rotating drum. Therefore, one of ordinary skill in the art at the time of the invention would have been motivated to adjust the dispensed length of tread, either manually or automatically, in order to effectively match the ends of the tread pattern and eliminate any possible tread unevenness, in view of the Admitted Prior Art and Schelkmann, as further detailed below.

Regarding the "adjusting" step of claim 14, the method of Taylor involves the precise circumferential measurement of the carcass and the subsequent dispensing of a length of tread based on said measurement. However, it is clearly evident that if a repeating tread pattern is used, a length of tread based on said measurement would only have matching tread ends (leading and prevailing ends) if the repeating pattern of the tread existed over an exact increment of the circumferential length of the carcass. For example, using a general example, if a circumferential distance was 55 millimeters and the repeating tread pattern occurred every 10 millimeters, the dispensed tread length, according to the method of Taylor, would be 55 millimeters. This method, however, would not result in a length of tread having matching tread ends. Therefore, since matching tread ends are desired, as evidenced by the Admitted Prior Art and Schelkmann, one of ordinary skill in the art at the time of the invention would have been motivated to "adjust" the dispensed length of tread, either manually or automatically, for the benefits detailed above.

With respect to claim 22, the apparatus of Taylor contains a measuring device (15), a tread dispenser (mold/cutter assembly), and a tread cutter (16), wherein the tread dispenser contains a conveyor or "tread drive" that allows the tread to be "adjusted" as desired, it being recognized that such an adjusting step is necessary to obtain matching tread ends.

Regarding claims 23-26, as best depicted in Figure 4, Taylor discloses the dispensing of tread material from a roll and subsequent conveying of said tread material by a series of rollers. Furthermore, rollers and additional conveying means are conventionally used in a variety of locations in tire application systems in order to assist

in the movement of a length of ply material and provide any desired tension or compression.

As per claim 27, applicant has stated that a "curved track" eliminates any substantial bending or stretching caused by abrupt changes in the path of travel (Page 9, Lines 2-6). Taylor depicts a flat conveying system or track that guides the length of tread. It is evident that the track outlined by Taylor does not contain any abrupt changes in the path of travel and thus does not contribute to any additional bending or stretching. Additionally, the specific "curved track" described by the applicant is an obvious variant over the track illustrated by Taylor and would be beneficial if the point of application needed to be different from the level at which the tread was dispensed due to the design of the additional apparatus. Thus, Taylor describes a track system that operates as an equivalent alternative to the claimed track system in that it eliminates substantial bending and stretching, it being well known and conventional to employ curved tracks in tread application systems.

5. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor, the Admitted Prior Art, and Schelkmann as applied to claim 14 above and further in view of Currie (US 5,882,457, of record). As previously stated, Taylor, in view of Admitted Prior Art and Schelkmann, discloses a method of applying tread material based on the circumference of the tire, wherein said method includes an adjusting step to properly match the leading and prevailing tread patterns. Taylor, however, is silent with respect to the use of a gripping means to apply the tread material. In any event, gripping means are conventionally used in the application of tread materials to accurately position and center said tread with respect to the axial direction of the tire

casing and ultimately provide the desired splice. For example, Currie is directed to a retreading apparatus in which a gripping means is activated by a sensor, whereby the leading end and trailing ends are clamped or gripped and subsequently positioned onto the tire casing for the reasons detailed above. Additionally, Schelkmann suggests that guide means may be provided to provide accurately positioning a given length of tread (Column 3, Lines 35-39). As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a gripping or clamping mechanism to accurately position the tread material, with respect to the axial direction, on the tire casing, as set forth below.

Regarding claims 15-18, while Taylor is silent with respect to any gripping means, such a method is extremely well known and conventional in the tire industry. Gripping or clamping mechanisms are extensively used to accurately place the tread material onto the tire casing (i.e. material is centered on tire casing), as evidenced by Currie and Schelkmann. For example, Currie describes a retreading system in which a tread material passes a sensor, which in turn initiates the clamping of the leading and trailing edges. Although there is no "stop" apparatus, it is the examiner's position that the stop and sensing means of Currie can be viewed as functional equivalents in the art since they both initiate a first clamping of the leading edge. It is additionally noted that both the claimed "stop" apparatus and the sensing means described by Currie are conventionally used to provide a signal or some additional initiation activity in various industries. Thus, such a design would have been readily appreciated by one of ordinary skill in the art at the time of the invention.

6. Claims 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor, the Admitted Prior Art, and Schelkmann as applied to claim 22 above in view of Okuyama (US 4,804,426, of record). Taylor, as previously mentioned, discloses a tread cutting apparatus comprising a measurement device and a tread dispenser in accordance to the limitations of the claimed invention. The reference, however, is silent as to the use of a gripping or clamping mechanism composed of a first and second clamp. In any event, clamping mechanisms are extremely well known and conventional in the tire industry in order to accurately position a desired length of ply material onto a tire casing. For example, in describing conventional building methods, Okuyama describes the clamping of a front and rear portion of a rubber sheet and subsequent conveying or propelling of said rubber sheet towards the tire drum (Column 1, Lines 30-40). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a gripping or clamping mechanism, as suggested by Okuyama, in the apparatus of Taylor, as set forth below.

Regarding claims 28-33, Okuyama provides one example to evidence the conventional use of gripping or clamping mechanisms in the application of ply materials in tires. Although the reference fails to specifically describe the particulars of the gripping mechanism, the limitations provided by these claims define the conventional makeup of such a mechanism. In particular, these systems are specifically designed with a series of encoders or sensors in order to locate the front and rear ends of the ply material. Furthermore, the clamping mechanism is conventionally designed to grip the ply material and subsequently convey it along a desired path in order to accurately position said ply material on the tire casing. Also, it is well known to provide either a

sensor or a "stop" apparatus to provide the location of the front edge, at which time the front gripping piece is contacted with the front edge of the ply material. Thus, claims 28-33 define a gripping mechanism that is conventionally used in the application of ply materials in the tire industry to properly position a given length of tread material onto an existing carcass.

Response to Arguments

7. Applicant's arguments filed December 19, 2003 have been fully considered but they are not persuasive. Applicant provides the following arguments with respect to the use of Taylor: (a) the reference describes the precise measurement of the carcass and communicates with the tread cutter and not the tread dispenser and (b) the reference is directed to the "precise" measurement of the tread and thus teaches away from any adjusting step.

First, as set forth in the previous rejection and above, the tread dispenser assembly comprises either the molding station (Figure 1) or the roll of tread (Figures 2 and 4) and the tread cutter. Thus, by communicating with the tread cutter, the measurement device of Taylor is necessarily communicating with the tread dispenser. It should be noted that this structure is analogous to that of the claimed invention in which the tread dispenser includes the tread cutter (Page 8, Lines 1-11). Additionally, there is some form of communication between the tread cutter and the mold or roll that stops the conveying of the tread (cutter does not activate with continuous feed of tread). Therefore, the measurement device of Taylor automatically communicates the circumference of the tire casing to the tread dispenser in accordance to the limitations of the claimed invention.

Second, while Taylor defines a "precise" measurement of the tire/carcass circumference, it is clearly evident that this length of tread does not necessarily result in the matching of tread ends if a repeating tread pattern is used. As set forth above, it is necessary to adjust the dispensed length of tread to obtain an accurate matching of the tread ends, it being recognized that such a matching is desirable in the tire industry, as shown for example by the Admitted Prior Art and Schelkmann. In particular, Schelkmann describes the cutting of an elongated strip of tread having a length approximately equal to the length of the carcass circumference in such a manner that the tread patterns at respective ends match. This teaching is analogous to providing a dispensed length of tread that is based on the circumference of the carcass/tire ("precise" measurement of Taylor) and adjusting the length of tread if the respective tread ends are not consistent with one another.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(703) 605-4397**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Justin Fischer

February 23, 2003

Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700